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DEVELOPMENT OF CRITERIA AND PROCEDURES
for
MANAGEMENT OF CLASSIFIED DOCUMENT COLLECTIONS

by

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FINAL REPORT

Period Covered: 8 July 1968 through 14 April 1969

14 April 1969

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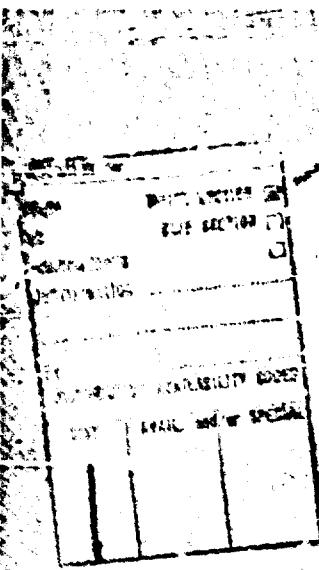
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ABSTRACT

This report describes work done in development of criteria and procedures for management of collections of classified documents. Material is presented on philosophy of operation, concept of user service, accession and retention. Much of the discussion is based upon the concept of conversion to a microfiche-oriented library; however, hard copy documents are also considered. Some of the work is specific to the Air Force Cambridge Research Laboratories although an effort has been made to keep material as general as possible. Specific procedures are presented for handling a document collection containing both microfiche and hard copy documents.

This project was sponsored by Air Force Cambridge Research Laboratories; Office of the Chief of Engineers, Department of the Army and the Army Research Office.

TABLE OF CONTENTS

	<u>Page</u>
PART I	
SECTION I - INTRODUCTION	1
SECTION II - PURPOSE	3
SECTION III - GENERAL DISCUSSIONS	4
A. Philosophy of Operation	4
B. Concept of User Service	5
C. Accession	7
D. Retention	9
E. User Service	10
F. Archival Function	11
SECTION IV - SPECIFICS AT AFCRL	12
A. Accession	12
B. Retention	15
SECTION V - COMMENTS AND SUGGESTIONS	19
A. Provision of Downgrading Card	19
B. Downgrading of Microfiche	19
C. Compilation of Classification Change Noti.	20

TABLE OF CONTENTS (Con't.)

	<u>Page</u>
PART II	
SECTION I - PROCEDURES	21
A. Accessions	21
B. Retention	24
C. Screening	28
D. Conclusion	31
APPENDIX I - FIELDS OF INTEREST FOR AFCRL	32
APPENDIX II - FORMS AND LETTERS	36
APPENDIX III - STATISTICS AND DISCUSSION ON THE SCREENING OF THE AFCRL CLASSIFIED COLLECTION	40
BIBLIOGRAPHY	45

PART I

DISCUSSION

SECTION I

INTRODUCTION

Any library which handles quantities of documents has severe problems of determining what documents to access, what form to obtain, how to catalog, how to make them available to users and, finally, how to determine and apply policies for retention. When documents are classified the problems are magnified by requirements for security, accountability, clearance and need-to-know of users, divided catalogs, changes in classification either by special notice or by time-phased downgrading and the other problems of handling, maintaining and controlling a collection of classified documents.

The Air Force Cambridge Research Laboratories (AFCRL) Research Library was the site for a pilot project, jointly sponsored by AFCRL and the Office of the Chief of Engineers, and Army Research Office, Department of the Army, to develop and apply criteria and procedures for management of classified document collections.

This work is in a very real sense a follow-on to the work reported in the Army Technical Library Improvement Studies (ATLIS) Report 11 (Luger, H. and Booser, R. "Classified Information and Technical Libraries" Control Data Corporation, January 1967, AD 812 521L). That report discussed the impact upon libraries of the security requirements involved in handling classified information. This report presents and discusses a set of criteria and procedures for dealing with classified documents and reports on the results of their application to the classified document collection of the AFCRL Research Library.

This report describes the project, criteria and procedures, results, level-of-effort applied and other pertinent facts. It also presents a discussion of the general nature of the problems of accession and retention to assist other organizations in developing criteria and guidelines to meet their own particular needs. To this end the discussion is fairly general. It mentions and discusses factors which bear upon decision but does not presume to prescribe weighting factors or decision rules. Each organization must, of necessity, determine its own requirements the resources to meet these requirements, special situations which must be considered and a host of other factors which bear upon criteria formulation and application.

The main text of this report concentrates on the general discussion but uses the AFCRL work for examples as appropriate. The more specific material pertaining to AFCRL is presented in the Appendixes for reference by others making use of the report in developing their own criteria and procedures.

The technical work reported upon in this report was performed by Jack C. Rea and Charles J. Sadlier. Assistance in the early stages was rendered by Ronald J. Booser.

I would like to express my appreciation to Mrs. Kathleen Carnes for helpful discussions, useful advice and prompt decisions upon technical matters. I also wish to express my gratitude to Miss Paulina Condon, Mrs. Eleanor Gildersleeve and Mr. Dominic Contardo for their assistance in the project through their detailed knowledge of the document collection and indexes.

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SECTION II

PURPOSE

The overall purpose of this report is to explore the factors involved in management and control of a document collection containing both classified and unclassified documents. The discussion will point up the special factors relating to classified documents; however, much of the discussion will be equally relevant to unclassified documents. The discussion will also present an overall view of factors affecting operation of a document collection and policies and procedures required to establish and maintain control over accession, circulation and retention of materials.

The discussion will, necessarily, be focused upon the particulars of the AFCRL Research Library document collection where the work was actually done; however, the discussion will be kept as general as possible. Factors to be considered in arriving at decisions on policies and procedures will be discussed as objectively as possible so as not to bias the reader as a result of decisions made in this one particular case.

SECTION III

GENERAL DISCUSSION

This Section discusses in general terms factors surrounding operation of a document collection and the policies and procedures which must be determined to provide operating guidance and control.

The discussion is organized to present an overall philosophy of operation, a concept of user service and summaries of material presented on accession, retention, security and management procedures.

A. Philosophy of Operation

Every library, document collection or other similar activity should be guided by an overall philosophy or set of guidelines which governs operations and which determines what to obtain, how to handle it, how to make it available to users and when and how to discard material no longer needed.

Guidelines for determining what to obtain are almost always present, even though not necessarily called by that name nor necessarily in written form. These guidelines make up the basic accessions policy and determine what is to be obtained (subject coverages, texts, monographs, serials, documents, etc.); in what form (hard copy, microfilm, microfiche, etc.) and how to catalog accessions (full local cataloging, limited local cataloging, rely upon secondary distribution agency cataloging, use secondary distribution agency cataloging plus supplementary local cataloging, etc.).

Guidelines for document handling concern the manner in which the documents are made available for use. Guidelines cover such things as catalog availability (open catalog, closed catalog or partly open and partly closed); whether to keep documents as received or to bind some or all; whether to use open area shelving or to require users to rely upon document personnel for service, etc. Of course, the focus here is primarily on classified documents which renders some of the procedures compulsory rather than optional. Additional guidelines required for classified materials include: circulation procedures (use of temporary loans or official transfer out and back in) and procedures to be employed in complying with the time-phased downgrading requirements spelled out by Department of Defense Directive 5200.10, the corresponding service regulations (AFR 205-2, AR 380-6 and OPNAVINST 5500.40B) and the Department of Defense Industrial Security Regulation 5220.22R.

The final group of guidelines to be considered here concern those developed to deal with the problem of determining which documents are no longer needed and may therefore be discarded. Reasons for discard may include: obsolescence, supercession, a change in mission rendering material non-relevant, or a lack of storage space which necessitates reducing the quantity of documents stored.

All these guidelines, policies and procedures cannot be arrived at, applied or changed in isolation from each other. They must all interlock to produce the desired results. For example: accession and retention policies must agree otherwise material will be obtained which does not qualify for retention or, conversely, material which qualifies for retention is never obtained. Policies must allow for any selective dissemination projects the library may engage in either experimentally or as a regular part of operation.

Guidelines, policies and procedures, once established, cannot be simply allowed to continue indefinitely. A regular systematic process of relating current guidelines to changing situations must be undertaken. Under normal circumstances review should probably take place at intervals of one to two years; however, should any major changes in mission, responsibility or organization take place in the units supported by the library the guidelines, policies and procedures should be examined immediately for changes required by the new environment. Review periods shorter than one year do not appear appropriate since, except for major reorientations, things do not change so rapidly as to require significant shifts on a month-to-month or even semi-annual basis. Reviews should also consider prospective changes as well as those which have already occurred. This forward-looking action can allow the library as a whole, and the document facility in particular, to anticipate a need for changed or additional emphases in the available materials and to explore the various sources for obtaining newly relevant materials, getting on distribution lists and the other actions required to develop a capability to provide support in new areas.

B. Concept of User Service

In the past substantially all documents were available in hard copy only so that to serve the user the library had, of necessity, to obtain, store and retrieve the hard copy. The continuing advance of technology has made available microcards, microfilm and now microfiche to allow distribution of reports at lower cost, reduce storage space and, as a result, permit storage of many more documents in a given space.

Generally speaking it is highly advantageous for libraries to switch to microfiche. (In this report microfiche will be referred to many times. The reason for this is that microfiche has, at present, the greatest acceptance. Where microfiche is discussed or referenced, the reader should keep in mind that microcards and microfilm, if available, can also substitute for hard copy.) Unfortunately, the user normally has a strong preference for hard copy. This preference is understandable, if unfortunate, and can be overcome, if at all, only by education, familiarity and the ready availability of readers when and where the user wants them. Another factor which can be exploited to convert the user is that when he asks for a document available in microfiche he can be given the microfiche while the library either orders or processes another copy. This has a beneficial psychological effect upon the user and the library also avoids having to make records of where the document has gone in order to recall it if the need arises.

The recent pattern of events has seen secondary distribution agencies, including Defense Documentation Center (DDC), Clearinghouse for Scientific and Technical Information (CFSTI), and those operated by the National Aeronautics and Space Administration (NASA) and the Atomic Energy Commission (AEC), become the primary source of documents. These secondary agencies have improved their indexing and abstracting to the point that libraries no longer need undertake the cataloging of those materials which come through these agencies. This of course saves large amounts of time and effort which can be applied elsewhere.

From the considerations above the general outline of a user service philosophy can be indicated. It is certainly true that the general outline is not universally applicable because of differences in customer population, fields of interest, physical facilities, personnel, finances and other factors; however, it may serve as a starting point for development of a set of guidelines for user service after suitable modification to meet local situations.

1. Plan to provide the maximum possible service from microfiche documents.
2. Rely to the greatest extent possible upon indexing and cataloging performed by the secondary distribution agencies.
3. Provide an adequate number of good microfiche readers in the document area and back these up by a good microfiche printer to provide hard copy when needed. Encourage users to make hard copies from microfiche on a self-service basis. Also make sure that readers are reasonably available in work areas and offices. Install equipment for making immediate duplicates of microfiche. When a user indicates

an interest in any microfiche held by the document room, make a copy immediately and give it to him for permanent retention. If the microfiche is not held by the document room, it is ordered immediately for the user. This applies to both classified and unclassified material subject, of course, to clearance, need-to-know and limitations on distribution. (Any copying or duplication of a classified microfiche must be carried out in accordance with security regulations which require approval of the responsible office.)

4. Cut down on the number of hard copy documents held through a determined program of screening and discarding. Attempt to restrict accession of new hard copy materials by screening incoming documents, requesting removal from non-productive distribution lists and by attempting to get initial distribution only in microfiche.
5. Check availability as microfiche from secondary distribution agencies and, if not available, consider the possibilities for converting existing and necessary hard copy materials in the collection, which may require significant use, to microfiche locally and then destroying the hard copies.

These points underlie much of what will be discussed from here on in this report. As mentioned before, they require adaptation to individual circumstances just as do the policies and procedures presented.

C. Accession

Accession generally concerns itself with policies and procedures for obtaining documents judged to be appropriate for addition to the permanent collection. Accession must be controlled to avoid the opposite extremes of getting everything and getting nothing. The first extreme leads to a collection which is large but which contains a low proportion of relevant material while the other extreme leads to a collection so constricted in size as to be of little use. There are four basic methods by which a library can add to its document collection. Each of these methods will be discussed in the paragraphs which follow.

1. Direct Automatic Distribution

In the past it has been possible to receive direct automatic distribution of material in specified fields of interest from NASA and AEC. They have, however, announced their intention to discontinue this service. It seems rather unlikely that others such as DDC,

CFSTI or The American Institute of Aeronautics and Astronautics (AIAA), which publishes International Aerospace Abstracts (IAA), will now institute programs of this sort. On this basis this formerly useful method of acquisition appears at present to be at an end.

2. Direct Order

The second accession method is through ordering specific microfiche from the secondary distribution agencies. This can be accomplished via two methods: (a) ordering duplicate copies as the library users order their own copies, or (b) scanning the announcement bulletins for documents in the subject areas of interest. The former method works if the library has complete control over ordering. If the library does not have this control, as is the case in Selective Dissemination of Information (SDI) programs, it must rely less on method (a) and more on method (b) for adding documents of interest. This method will require that the acquisitions and selection staff scan the announcement bulletins as they come out for any documents of obvious interest and then request microfiche copies. Of course, this should not be a major effort. We must assume that the users themselves will request most of these documents which they need.

3. Original Distribution

The third accession method is through the receipt of an original hard copy report directly from the source. This can be expected to happen in the case of all local publications plus a number of others for which the library and its users may have little or no use. The documents group should undertake, in conjunction with the acquisitions and selection policy, to plan a closely watched long-term program to remove themselves from all outside distribution lists which send their output to the secondary distribution centers. Care must be taken, however, to assure receipt of all local reports and all important and applicable reports from those agencies which may not put all their output into the secondary distribution systems.

4. Inherited Material

The fourth, and final, means of acquiring documents is perhaps the most difficult of all to control -- the "gift" from the user who is cleaning out his own files. These documents should be handled as though they were being weeded from the library's own collection. Those which fit the retention criteria will be kept, the rest discarded.

In summary, documents will be acquired in microfiche and, to the degree possible, by category distribution. In general, only the documents unavailable in microfiche and local reports will be kept as hard copy.

D. Retention

Retention concerns itself essentially with the establishment of policy and procedures governing which documents should be kept in the collection and which others should be returned to the source or destroyed.

Retention is not a one-time thing which sets up criteria, applies them and then is forgotten. On the contrary, retention should be a dynamic and continuing activity which: (1) continually reviews criteria for continued applicability and makes changes as needed to reflect alterations in subject matter coverage, forms of document to be held, usage data experience, and other dynamic factors, (2) applies the changed criteria to the collection periodically to weed out documents no longer meeting retention criteria, (3) processes material periodically to take care of notifications of regraded material for security classification, marks appropriately that material which has been downgraded through the time-phased downgrading and declassification process, and (4) otherwise "house keeps" the collection and all surrounding operations and policies to assure that things stay under control.

Retention must also work closely with accession to assure that policies in the two areas do not get out of step with each other which could lead to accession of material which will be automatically discarded.

One of the major problems in the retention area is dealing with the time-phased downgrading of documents as prescribed by Department of Defense Directive 5200.10, implemented by the various service regulations (AFR 205-2, AR 380-6 and OPNAVINST 5500.40B) and specified by the Industrial Security Manual (5220.22M).

Under this directive all classified documents are to be assigned by their originator to one of four groups for purposes of downgrading on an elapsed time basis. Groups 1 and 2 are not subject to downgrading and, thus, cause little trouble. Group 3 documents are downgraded one step at a time at twelve-year intervals until they reach a classification of Confidential at which level they remain permanently. Group 4 documents are downgraded at three-year intervals until they reach a classification of Confidential and then remain Confidential until a total of twelve years has elapsed at which time they become Unclassified.

The regulation allows deferral of the time-phased downgrading action for material in storage; however, the action must be taken when material is withdrawn for use or for transfer to another holder.

E. User Service

The primary objectives of a document group should be to offer the user the following services:

1. Bibliographic searches of all sources for particular data or information.
2. Copies of all local publications for reference purposes.
3. Microfiche copies or duplicated copies of requested documents for permanent retention.
4. Hard copies from microfiche of material desired, subject to security requirements.

Each of these services is reviewed in the following paragraphs.

The prime function of a document group, in an operation such as AFCRL Research Library, is to provide the interface between the user and the available tools for searching out the data/information he needs. It is inconceivable that a research scientist would be able to keep abreast of all the bibliographic retrieval tools in a single field, let alone for those in the broad coverage of a large research-oriented library. The document personnel must know how to coax the real problem out of the user. Should he receive a local search or a computerized search or both? What is the best source for his particular type of data/information? What are the user's time requirements? These questions, which must be answered every day by a document group, must be their main objective; not just the filing of documents or microfiche.

The local library is not restricted to its own resources. It may call upon specialized information sources in many fields. A number of scientific and technical and information services are listed in DDC publication DSAM 4185.3. An additional source is the Science Information Exchange of the Smithsonian Institution.

Secondly, the users should have confidence that the library has copies of any and all local reports. Some duplicate copies and material not suitable for conversion to microfiche may be available for loan, while others will be available only as microfiche. However, the library should maintain at all times a hard copy of every document produced by or for the local organization. In addition, it is desirable that these documents be indexed locally to a depth greater than that provided by the secondary services. This is so that the library will be able to retrieve local documents when no one else can. This will likely

require the making of 10 to 15 catalog cards for each local publication. However, indexing methods of the secondary publications should be studied by catalogers to insure indexing to the depth required.

If a microfiche duplicating capability exists, the user is given a duplicate of any microfiche he requests from the files. Alternatively an immediate order is placed with a secondary distribution agency for any microfiche desired but not on hand. Either way the user cannot fail to be impressed by the fact that the library thinks of the user first and foremost.

The library should have a capability to make hard copy from microfiche to satisfy those users who do not like microfiche or who require a full-size hard copy for any of a number of reasons.

In addition to those documents available from secondary services there are certain other documents which have not been entered into secondary sources for one reason or another. These, if retained, should be cataloged; since the objective in making these documents available to the library users coincides with the overall philosophy of the library to provide as much coverage to the user as possible, using the available external resources where possible, and providing local documents even when not available from any other sources. The depth of cataloging need not be great, but it should be complete. These documents, to a large extent, will be older documents not available elsewhere.

F. Archival Function

Another function which may be served by the library is to function as the agency archives. In this function the library attempts to secure and preserve each and every document, within specified limits, issued by the local activity. As an example, the AFCRL Research Library serves as an archive for all technical publications of AFCRL and its contractors. One hard copy is retained. This copy is made available for reference only and is not circulated under any circumstances. Additionally, all documents which can be converted satisfactorily will be converted to microfiche and the master fiche will be held solely for making copies as required for circulation.

SECTION IV

SPECIFICS AT AFCRL

In this Section the general material presented earlier is made more specific by presenting the specific recommendations developed for the AFCRL classified document collection and applied there to screen the collection and to maintain the collection in a controlled posture for the future.

A. Accession

As indicated earlier, accessions are important to a document collection and must be kept under the control of policies and procedures to guide what is obtained, in what form and how it is cataloged (if at all) and made available to the user. The following material describes several aspects of accessions at AFCRL, describes policies and procedures and indicates, where appropriate, how the policies and procedures were developed.

1. Information Categories

Two basic sources for information on what categories of materials should be obtained were used. The first of these was inspection of the log of queries received by the document room. This source was indicative but not comprehensive enough to meet requirements. The second source of information was the published annual "Report on Research". This report is published annually and gives, in unclassified form, summaries and descriptions of the overall laboratory, the individual laboratories and the various projects and types of research undertaken. Several of these annual reports were read and studied, discussions were held with library personnel, some recent publications were examined and several knowledgeable senior supervisors and executives were interviewed. From this a list of fields and sub-fields of interest was developed which covered the interests of the research scientists at AFCRL. The list developed is presented in Appendix I. This list was developed originally to guide the screening process for selecting material currently in the collection for destruction as not relevant, or no longer relevant, to the AFCRL mission. The same set of fields of interest are now to be used in screening incoming material for addition to the collection and, to some degree, for ordering other material which appears relevant.

2. Sources and Formats

A decision has been made to utilize microfiche to the maximum extent possible. Thus, current material received from DDC, CFSTI, NASA, and AEC is obtained only in microfiche except on user request. Older material, not available in microfiche, will continue to be obtained in microfilm or hard copy as needed but normally will be ordered only to meet an immediate need and destroyed or transferred when that need has been met. A certain amount of material is being received from other direct sources in hard copy. There are basically four categories of this material which are handled as follows:

- a. Some of this material does not meet criteria for retention and is discarded immediately.
- b. Other material meets criteria for retention but is material which is expected to be entered into one of the secondary sources and become available in microfiche. Such material is held in a suspense file for checking against the announcement bulletins and subsequent replacement by microfiche. When a microfiche is received the hard copy is discarded.
- c. Some material placed in the suspense file in (b) does not show up in the announcement bulletins. When this happens the originator is contacted to determine whether the document is to be entered into a secondary source and suggesting that, if no plans for such exist, that such entry be considered.
- d. Some material is such that entry to a secondary source is deemed unlikely. In these cases the originator is contacted to determine the possible availability of microfiche. If microfiche is available it is ordered immediately, otherwise the document is indexed into the collection and held as hard copy or, in some cases, it is converted to microfiche locally.

3. Cataloging and Indexing

Only two types of materials are recommended for cataloging locally. It has not been definitely determined to what degree the AFCRL internal documents and contract documents will be given additional cataloging beyond that provided by DDC. Substantially all of these reports go to DDC and are indexed there so the rationale for local cataloging is based primarily upon providing additional entries to insure being able to locate the document when no one else can do so. However, with a quite stable personnel structure in both the laboratories and the library, there is reason to suppose that this additional cataloging, for the use it is likely to get, is marginal in payoff for the effort involved. Another

aspect of the special treatment accorded to AFCRL internal and contract documents is that they are exempted from the rule that only microfiche will be held if available. One hard copy is held for archival purposes. Older documents for which microfiche is not available are converted, where possible, to microfiche locally for normal use.

The other type of documents to be cataloged are those which meet criteria for retention but which, for one reason or another, are not cataloged and indexed by one of the secondary distribution agencies. While the cataloging, if any, to be done on the AFCRL reports is in the nature of supplementary cataloging and should require only a few cards, the cataloging for these reports must be complete and might require ten or more cards. Catalogs currently in use for which cards may be required include: Main Catalog (corporate author(s)), Titles(s), Contract(s), Series(s), Subject(s) and Author(s).

4. Time-Phased Downgrading

The time-phased downgrading of documents prescribed by Department of Defense Directive 5200.10, the Industrial Security Manual (5220.22M), and implemented by the various service regulations (AFR 205-2, AR 380-6 and OPNAVINST 5500.40B) are being taken care of through the use of a card file which was set up as part of this contract and which will continue to be used and maintained by personnel at the library. The file consists of a 3 x 5 card for each classified document (hard copy or microfiche) held by the library. The preparation and format of these cards is described in detail elsewhere; however, a brief description will be given here.

All classified documents are examined when received in the document room and screened for retention. (Supplementary cataloging, if any, is done after these steps are accomplished.) A card is prepared containing the following information: identification number for controlling shelving (AD number, accessions number, etc.), month and year of publication, an unclassified title or short title, the original source of the document (normally corporate author), the original classification and the time-phased downgrading group assignment. From the classification, group and publication date the date(s) upon which downgrading actions are to be taken is determined and entered upon the card. The card is then filed by the month and year during which the next action is to be taken. Each month the cards for all the previous month's scheduled actions are pulled, the documents are pulled from the shelves and downgraded as indicated and the documents are then

reshelved. The date of downgrading and the initials of the person taking the action are entered on the cards. Those cards which call for another downgrading action are refiled for the next action. Cards which call for no downgrading action are placed in a separate file for reference purposes.

B. Retention

Once documents have passed by the filtration process of accessions and have become a part of the collection, the retention part of operations takes over to determine at what point in time a document has outlived its usefulness and is to be discarded. Thus, a document becomes a candidate for destruction immediately and will, based upon current policies and procedures, be judged periodically and retained only so long as it meets the criteria for retention.

Age, by itself, is not a particularly good indicator for retention or discard. Age must be considered in conjunction with other factors such as speed of progress in the field; availability of compilations, reviews, summaries, etc.; and whether the material may be of a type not subject to supercession such as climatological data or fundamental physical and chemical properties.

A document may become a candidate for destruction for any, or several, of a number of reasons: mistaken accession of material judged to be relevant but which actually is not, supercession of materials by more recent documents, changes in local mission orientation which renders certain material no longer relevant, availability of compilations rendering individual documents superfluous, availability of documents in preferable forms such as substitution of microfiche for hard copy, and determination that materials have not and are not being used.

The following material discusses various aspects of retention at AFCRL, describes policies and procedures and indicates, where appropriate, how these policies and procedures were developed.

1. Categories of Documents

For purposes of retention and screening for retention, hard copy documents are considered to be of three types.

The first type of document is that produced internally at AFCRL. (This group also includes documents issued by other agencies which report on work performed by AFCRL or which are jointly or wholly authored by AFCRL personnel.) These documents are exempted from the retention policies and are not subject to being discarded.

One hard copy of them is to be bound for permanent retention and, if microfiche is not available from DDC, it will also be converted, if possible, to microfiche locally. Pending the actual binding of documents, two copies are kept to guard against a defective copy.

The second type of document is that produced under contract to AFCRL. Originally it was decided to treat these documents substantially as though they were external documents, however, this was changed and these documents are now to be treated essentially as though they were internally produced documents. Progress Reports are to be kept only if there is a substantial technical content (as against administrative content) in the document. Since very few non-technical Progress Reports have entered the AFCRL collection, very few documents are subject to destruction for this reason.

The third type of document is that produced by an external agency not under AFCRL contract. These documents are subjected to the full rigors of the screening process and as a result the number of hard copy documents in this category has been drastically reduced. (See Appendix III for details on documents processed and retained.) These documents are to be kept as hard copy only if the subject content falls within the categories set out in Appendix I and the document is not available in microfiche.

Since only the external agency documents (type three) are subject to screening for retention, the remaining discussion here should be understood to apply, except where specifically indicated otherwise, only to these external documents.

2. Relevance to AFCRL Work

Retained documents should have a direct relationship or a reasonably clearly perceived relationship to present and future AFCRL research activities (See Appendix I). Relevance to past AFCRL research should be considered since it is not unreasonable to expect future work to proceed down some of the avenues which have been explored in the past. Exceptions to the foregoing statement occur where certain areas of work have been specifically removed from AFCRL and responsibility for them has been transferred elsewhere. Relevance should not be judged too narrowly since not even the research scientist can judge accurately whether much material is relevant or not. The history of scientific research is full of instances in which work performed elsewhere and in earlier times has become crucially important in seemingly unrelated fields.

3. Lack of Published Indexes

A document which has not been indexed in available publications, provided it meets other criteria for retention, may well be a candidate for retention. This is because only local indexing can provide a route to the document should it ever be needed.

4. Unavailability of Material

In the past, documents, once obtained, had to be kept so long as a chance existed that they might be needed since replacement might be difficult, if possible at all. Fortunately, in recent years, the availability of hard copy, microfiche and microfilm from the secondary distribution activities such as DDC, CFSTI, AEC and NASA has made retention of hard copy documents which are available from these sources unnecessary unless they are in frequent use.

5. Document Usage

The low storage space needed for microfiche (and to a lesser degree microfilm) makes it possible to consider keeping numbers of relatively inactive documents in this form; however, hard copy documents should be considered for discard if the usage is low. Users prefer hard copy to microform documents and high usage documents should be kept in full-size hard copy. When ordering material for library retention it is doubtful that other than microfiche should be ordered unless there is a significant likelihood of heavy use. As a general rule one will accept hard copy and hold it pending availability in microfiche at which time the microfiche will be obtained for permanent retention. If the hard copy has seen any use it may be considered for temporary retention pending a future review of usage.

6. Series, Final Reports and Progress Reports

Generally speaking, except for AFCRL internal and contract documents, those reports which may be termed Progress Reports will be discarded unless they contain material not repeated in the Final Report. Cumulation of technical material in the Final Report is typical and the Progress Reports should be considered for discard once they are old enough for interest in any administrative details to be passed. It is best to examine this material, in particular, in reverse chronological order to allow easiest judgement of the degree of technical material cumulated. This reverse sequence produces the best means for judging which, if any, early reports need not be kept.

One must be alert in screening these reports since the Final Report will most likely not include material on approaches tried but found un-workable or not satisfactory. These materials are normally found in the Progress Reports. In science and technology, knowledge of things that don't work can be quite valuable in avoiding the same pitfalls in future work. For this reason alertness to note mention of false starts and un-workable approaches is recommended.

One also finds reports which superficially resemble Progress Reports but which are, in actuality, one of a series of essentially independent reports on related topics or on various aspects of an overall investigation. Material in these reports is frequently omitted from Final Reports or merely alluded to with references to the older report. A certain degree of alertness is required to catch this type of situation and to avoid the undesired discard of these reports.

7. Classification and Downgrading

During the process of screening documents for retention all classified documents are physically handled and examined for retention or discard. This document handling makes it convenient to check all retained documents for assignment to one of the downgrading groups and to undertake assignment where this has not been previously accomplished. At the same time it is appropriate to mark documents to reflect any changes in classification which may have occurred by reason of expiration of the time intervals specified for downgrading. (This, of course, also implies changes to receipts, catalogs, etc., as required.) Also at the time the documents are handled it is desirable to prepare a card for the future downgrading actions which will take place later. This card is then filed, as discussed elsewhere, to trigger these downgrading actions at the proper time.

SECTION V

COMMENTS AND SUGGESTIONS

This Section presents some comments on actions, which taken centrally, could ease the burden on local document collections in keeping operations running smoothly.

A. Provision of Downgrading Card

A large problem for the local document collection is that of maintaining control over the time-phased downgrading of documents. As part of the work reported here, a 3 x 5 card form was developed giving all information required to know when documents come due for downgrading. While this fills the need for knowing when documents should be downgraded, it could be even more useful on an overall basis if the suggestions below could be implemented.

When used as developed at AFCRL this form takes care of their problem. However, each other location possessing a document, and wishing to set up a Downgrading File, must prepare its own card by examining the document and completing the information. A large proportion of hard copy distribution and close to 100% of microfiche distribution takes place through secondary distribution agencies. It, therefore, appears reasonable to suggest that these agencies might distribute the appropriate card with each classified document. It also appears reasonable to require each original producer of a classified document to include, as part of the document, a form giving the required information. This might be handled as a sheet containing the layout of the 3 x 5 card suitable for direct reproduction onto card stock or as an addition to the DD 1473 required of all documents produced under Department of Defense contract.

Admittedly, this places an additional burden on the secondary distribution agencies; however, by placing the burden there duplication of effort at many other locations is avoided.

B. Downgrading of Microfiche

Downgrading of microfiche (or for that matter microfilm) documents presents a special problem. One can mark the header or even the body of the microfiche in large size letters; however, this does nothing for the individual pages of the image. Reader/printers for making hard copies of microfiche are available and, obviously, when a copy of a page is made it carries the original classification regardless of any downgrading which may have taken place. At the present time

the only course open is manually to mark each reproduced page. This leaves something to be desired as an operational procedure.

At present DDC is undertaking a partial solution to this problem. When a document is downgraded the header information on the master microfiche is altered so that new copies carry the new classification on the header but the individual page images still carry the original classification. This is some help but it still causes problems if any pages are copied.

The only solution appears to be one which causes a lot of work for DDC (and presumably the other secondary distribution agencies) but which has the virtue of solving the problem centrally for users of microfiche. This solution calls for complete reshooting of the microfiche when a document is downgraded.

In essence the procedure would be as follows. When a document subject to time-phased downgrading is received at DDC one or two copies (as required for one or two downgradings) is tagged with the AD number, the date(s) for downgrading and set aside in a time-sequenced file. When a document is due for downgrading a full size hard copy comes up automatically from the time-sequenced file and is completely reshot with the classification markings changed by restamping or by overlays. As of the effective date of downgradings the old master is replaced by the newly reshot master and all future orders are filled by new copies.

Holders of microfiche can then replace their old copies, if desired, by ordering replacement microfiche subsequent to the date scheduled for downgrading. By keeping a Downgrading File the holders are automatically alerted to the availability of a new microfiche from DDC. In this case the Downgrade File is effectively acting as a Reorder File.

C. Compilation of Classification Change Notices

In management of a classified collection there are times when it is desirable to know whether a classification has been changed for reasons other than time-phased downgrading. DDC publishes notices in TAB of this sort; however, it is not currently able to provide either all-inclusive or selective listings of this material. This appears to be an area in which an additional capability could be developed. The priority for such a capability is not too high. The capability would be quite useful at times when a major reorganization of a classified collection was underway or when past-due downgradings and regradings were being undertaken.

PART II

PROCEDURES

SECTION I

PROCEDURES

As a part of the work performed on this project, procedures for establishing and maintaining control over the classified document collection were developed and tried where possible. Since the major effort of the project was in the area of screening for retention, the procedures for retention are more fully developed and have had the benefit of experience in use. The procedures for accession have not been tried out to any substantial degree as yet; however, they have been developed to be compatible with the procedures for retention and appear reasonable. In any case, changes are likely in procedures for both accession and retention as experience shows that certain aspects need to be relaxed while, perhaps, others are tightened.

Also, these procedures are intended to be guiding and not mandatory. In all cases judgement must be used by personnel applying the procedures to keep in mind the larger picture and the overall objective.

A. Accessions

1. Ordering Microfiche From Secondary Sources

Each secondary distribution source for microfiche publishes a bulletin announcing accessions. Each such bulletin is reviewed upon arrival and a check made of all sections containing material in the subject areas of interest to the activity. This list is derived from categories developed and published by the Committee on Scientific and Technical Information (COSATI). Documents not received by automatic secondary distribution (if any) are listed for ordering.

Users of the library frequently request documents which the library does not have. If the document appears to fall within the desired subject categories, the document room adds to the order of the user an order for a microfiche for its own retention.

As soon as AD numbers are assigned to internal and contract reports an order for microfiche is placed.

Documents to be ordered are entered on a work sheet of the type shown in Appendix II, Figure 1. This worksheet contains columns for entering all information pertinent to a given order and serves as a suspense file for checking on receipt of ordered material. Actual orders are placed weekly unless earlier ordering seems appropriate.

When ordered microfiche arrive they are checked off the lists and the lists will be held for analysis of orders as seems appropriate.

2. Documents Received On Direct Distribution

The document activity receives a large number of documents from the originators. This distribution, even though in many cases unproductive of useful documents, cannot be just turned off without a risk of loss of desired materials. The following procedures are designed to reduce these inputs without shutting them off completely.

A first step is to attempt to determine which sources are providing documents in the areas of interest and which other sources are not doing so. This is accomplished by checking all non-ordered primary distribution documents against the retention criteria. If the document meets criteria for retention the originator is sent a copy of a letter similar to that shown in Appendix II, Figure 2.

For those hard copy documents which have supposedly been sent to secondary distribution sources a "hold file" is set up. The file is sequenced by issuing organization and marked for month of receipt. Periodically, perhaps every three months, the receipts for the previous six months or so are checked against the accessions bulletin for entry into the system. Those documents which have entered the system are ordered in microfiche and the hard copy discarded, while those not found are replaced in the "hold file" to be checked later. If a document has not been found by the end of eight or nine months a copy of DDC Form 1 (or equivalent) is sent to the secondary distribution agency inquiring about the status of the document. If the reply is that the document has not or will not be processed by the secondary agency, the document is processed for cataloging provided it is still judged to be relevant.

3. Preparation of Cards For Time-Phased Downgrading

Following screening for retention, all incoming classified documents regardless of source or format are examined for preparation of a card to be used in carrying out the time-phased downgrading prescribed by Department of Defense Directive 5200.10 and the service regulations (AFR 205-2, AR 380-6 and OPNAVINST 5500.40B) deriving therefrom and in the Industrial Security Manual, Department of Defense 5220.22M.

Documents assigned to Groups 1 and 2 or assigned to Group 3 and classified Confidential are not subject to downgrading but have a card prepared. The Group 3-Secret, Group 4-Secret and Group 4-Confidential documents are subject to downgrading. The card used is

shown in Appendix II, Figure 3. The cards are filled out in ink but need not be typewritten. The reason why these cards need not be typed is that they are exclusively for internal library use and will be used only a very few times. Thus, they need not be prepared to withstand heavy usage as would be the case for catalog cards.

The following data is to be entered:

- a. Identifying number under which the document will be filed. (AD number, accession number, etc.) If the document is a micro-fiche put "mf" following the number.
- b. Month and year when the document was issued. (Not the date of issue by a secondary agency.) If the year is given but no month is given, assign the month as being December. If no date is given at all, the document should be examined for dates in text, on figures, on drawings, etc. If no date can be found an inquiry may be made to the originator or the current date may be used or the date of issue by a secondary distribution agency.
- c. Document title or short unclassified title. (Do not use a classified title.)
- d. Enter the source of the document (use originator not a secondary distribution agency).
- e. Circle the original classification of the document, i.e., the classification as of the date of issue. Circle S for Secret and C for Confidential.
- f. Circle the time-phased downgrading group to which the document has been assigned.
- g. Enter the date(s) (month and year) upon which downgrading actions, if any, are scheduled to take place. Determine these dates according to the following table.

<u>Original Class. and Group</u>	<u>Downgrade to Confidential</u>	<u>Downgrade to Unclassified</u>
S - 3	Date Issued + 12 years	Never
S - 4	Date Issued + 3 years	Date Issued + 12 years
C - 4	NA	Date Issued + 12 years

After the card has been completed it will be filed in the Downgrading File under the month and year scheduled for the first (or only) downgrading action. Sequencing of cards within the monthly groups is not necessary. Group 1 and 2 cards are filed by shelf number in a separate part of the file.

4. Cataloging

External documents which have not been indexed by secondary distribution agencies and which are held in hard copy or microfiche are cataloged. Cataloging conforms to the standard practices and includes capture of data and preparation of cards for at least the following items: Corporate Author(s), Title(s), Contract(s), Document Series Number(s), Subject(s), Personal Author(s). Additionally a Master Authority Card, or Main Entry is used to control tracings.

B. Retention

The policies for retention depend upon the type and format of the document. For example, internal and contract documents are excluded from the normal retention criteria. Similarly hard copy and microfiche documents come under different rules. Each procedure given will be specifically identified as to its applicability.

1. Time-Phased Downgrading

This procedure applies to all classified documents subject to time-phased downgrading regardless of format.

At the beginning of each month the cards in the Downgrading File for the previous month are removed, e.g., on 1 March 1969 the cards filed under February, 1969 are pulled. The cards are sorted into the different identification series (AD number, accession number, etc.) and into shelf sequence within each series. The documents are pulled from the shelves and marked to reflect the change in classification. Hard copy documents are marked at least on the front and back covers and the title page. Microfiche documents are marked on the envelope and, where room is available, on the microfiche itself using a marking pen of the permanent type. (Alternatively, a replacement microfiche may be ordered. When received, the replacement must be checked for proper downgrading.)

A notation of the date and name of the person performing the downgrading will be made on the card. Those cards which call for further downgrading action are separated, sorted and refiled in the Downgrading File for the month and year when the next action is scheduled to occur. Those cards which call for no further action may be destroyed or placed in a holding file as is wished.

Before the documents are reshelfed two additional actions must be taken. First a check is made for the presence of catalog cards which must be altered. Main or Shelf List Cards are pulled and used to locate and alter catalog cards to reflect the new classification of the documents. Second, for documents formerly Secret, the Document Receipts are pulled to relieve accountability and inventory records are adjusted as required.

The documents are now reshelfed taking note of any relocation required by the new classification.

2. Subject Coverage and Usage Screening - Hard Copy Documents

This applies only to external agency documents. The following procedure is applicable to a small collection; however, for a large collection it is desirable to divide the collection into sub-groups for purposes of this procedure and to set up a rotating procedure which would process each sub-group on a regular scheduled basis.

The purpose of the procedure is to maintain continuing control over those documents which are retained and to discard those which are no longer relevant to the activity mission as well as those which see little or no use.

Each time a hard copy document or microfiche is used it is coded and dated to indicate usage. Hard copy documents are coded and dated on the back cover or last page. Microfiche are coded and dated on the envelope.

After some appropriate time interval, and periodically from then on, the document is checked to determine: (1) is the subject matter still relevant to the activity mission and (2) has the document seen any usage.

If the answer to either question is "no" the document is a candidate for destruction. If the subject matter is no longer relevant the document is discarded immediately. If the subject matter is still relevant but there has been no usage for a period of, perhaps, five years or more the document should probably be destroyed. Each document is checked on the order of every two to three years, certainly no more than four years, for retention or destruction.

Documents chosen for destruction have all records (receipts, catalog cards, etc.) pulled and are then destroyed in accordance with applicable security regulations.

3. Subject Coverage and Usage Screening - Microfiche Documents

In principle at least, external microfiche documents can be subjected to the same sort of controls as indicated above for hard copy documents. In actual practice this is not necessary. Microfiche can be replaced, except for some controlled distribution documents, from the secondary distribution sources in a period of ten days to two weeks at low cost. For this reason recording of document usage and subject matter screening seems to be not worthwhile. Instead the microfiche documents are handled on a time group basis.

Microfiche documents are filed by AD, or other number, which is a close enough approximation to issue date sequence for present purposes. As storage space starts to become limited the oldest group of microfiche in any given series is discarded as a group with minimal screening. Since it is desired to keep microfiche of local internal and contract reports regardless of age there needs to be some way of distinguishing them from the other microfiche. Just how this is done is not too important. Five possibilities for this are listed below:

- a. Keep these microfiche separate from the others. This is not very good since it leads to potential trouble in searching for microfiche.
- b. Keep a separate file of microfiche consisting only of microfiche of local and contract documents in addition to the copies of these local microfiche contained in the main file. When the contents of the main file are discarded for age the separate file still contains copies of all local documents.
- c. Make a list of all local microfiche for use in sorting out the local ones when a batch is to be discarded. This appears reasonable since the library can get a complete listing, ordered by AD number, of all internal and contract reports held by DDC. Care must be exercised to include all names under which the local activity has ever operated. As an example, AFCRL has operated under about 13 names during its history. This could, however, overlook any reports, issued elsewhere, but reporting on local work or authored by local personnel.
- d. Mark all local microfiche in some distinctive manner either on the envelope or on the microfiche itself. This is not too good since the marks can be overlooked or lost, particularly if a microfiche is issued to a user and replaced for the library files by a new one.

- e. When discarding microfiche, check each header for issuing agency and/or contract number to identify local documents which may then be kept. This appears workable but will undoubtedly miss a few microfiche which should be kept.

It appears that alternative (b) is the best; however, special local circumstances may dictate use of some other method.

4. Classification Control - Other Than Time-Phased

In addition to the downgradings prescribed by the procedures for time-phased downgrading of documents there are other unscheduled changes in classification.

In all cases where a higher classification has been assigned to an individual document, and in some cases where a single document has been downgraded, a notice will be received indicating the action required. In other cases agencies will issue a compilation of changes in classification. In all these cases the procedure is clear and all that is required is location of the document using any reference tools necessary followed by marking the document to reflect the change followed by alteration of all records for that document.

The more difficult aspect of this procedure lies in the publication in the DDC Technical Abstract Bulletin (TAB) and in NASA's Classified Scientific and Technical Aerospace Reports (CSTAR) of the section on classification changes. On any material obtained through DDC (or other secondary distribution agencies) the library is not likely to receive a copy of the initial regrading notice. Therefore, the only source for these notices is via the TAB (or other bulletin). A routine must be established, perhaps as part of the scanning of bulletins described elsewhere, to look at these notices and to take the prescribed actions for any documents held. In the case of microfiche, which is filed by AD number (or other accession number), the job is very easy and very quick. Hard copy documents require reference through the catalog, or other reference tools, to locate these documents. In either case the document and all associated records are altered to reflect the change in classification.

While this procedure may appear time consuming the actual number of notices published is fairly small and the process of checking and reclassifying can be accomplished in an hour or less for each issue of TAB checked.

C. Screening

The procedures presented in Sections A and B, above, are the procedures developed for keeping the document collection in control once it has been weeded for obsolete and non-relevant documents. The procedures presented in this Section were developed to screen a collection for non-relevant documents and may be of use to any other libraries faced with the problem of screening their document collections and getting rid of documents no longer needed. Productivity figures, based upon application of the procedures at AFCRL, are presented in Appendix III.

1. Cataloged Hard Copy Documents

The documents were taken from the shelves and processed in reverse order of accession number. This sequencing allowed judgements to be made as to such things as supercession of earlier reports, duplication of work reported in Final Reports by earlier reports, etc. It also assisted in developing an awareness and knowledge of the assignments of documents to time-phased downgrading groups made for later documents. This assisted in making compatible assignments to earlier reports in a series or reports of a similar type.

A conveniently sized group of documents (75-200 depending on size) was removed from the shelves, placed on a cart and brought to the work area. The documents were then examined for determination as to whether they should be kept or not based upon the criteria for the particular type of document handled.

Those to be discarded were stacked in sequence in one pile. Following completion of screening the group, these documents were placed on the cart and moved to the catalog area where the Authority Cards were pulled preparatory to pulling cards from the catalog. In some cases one copy of a document was being kept while one or more others were to be discarded. In these cases the Authority Card was altered to reflect the change in number of copies held. Following this action the documents were separated into Secret and Confidential groups. Destruction Certificates were prepared for the Secret ones which were then stacked to be checked by library personnel for a final decision on destruction. The Confidential documents were separately stacked for checking and destruction.

The documents which were to be kept were handled as follows. Documents were checked to determine whether a future action to downgrade was indicated on the document. If future downgrading actions were indicated, a Downgrading Card was prepared. If a downgrading action

was past due, the action was taken at this time and, if a future action was also called for, a Downgrading Card was prepared. If a document had no assignment to a time-phased downgrading group, it was assigned to such a group based upon the criteria listed in AFR 205-2 (AR 380-6, OPNAVINST 5500.40B or Industrial Security Manual 5220.22M) and upon knowledge as to the group assignments made for comparable material on other (later) documents which had already been processed. The appropriate time-phased downgrading group stamp was placed on the document and the document was then processed as though it had been previously grouped.

As documents to be retained were processed they were separated into stacks according to their present classification. Where changes in classification had occurred, the Authority Cards were pulled and marked to reflect the change and then set aside for use in changing the catalog cards (to be described later). The retained documents were then reshelfed taking care to retain the proper order and to shelve in the proper place. (AFCRL shelves documents from the same accessions series in different places depending upon whether Unclassified, Confidential or Secret.)

Handling of catalog cards was essentially the same for those being removed and those being changed except for the replacement in the catalog of the changed cards. The Authority Cards were taken in groups of 100-150 and sorted into order by corporate author. The sorted cards were then used to pull cards from the Main (Corporate Author) Catalog followed by the Series Catalog. As cards were removed the Authority Cards were marked to indicate that cards had been pulled. The Authority Cards were then re-sorted for contract number and the Contract Catalog was stripped. Then a sort was made for title and the Title Catalog was stripped. Following this the Authority Cards were examined to determine whether any additional cards should be pulled for cases involving more than one corporate author, more than one series, more than one contract or more than one title. These extra cards were then removed. The Authority Cards were then separated into two groups according to whether personal authors were indicated or not. Cards were then pulled from the Personal Author Catalog. Sorting was not done since it would have been relatively ineffective in allowing a steady progression through the catalog. The Authority Cards were combined and then re-separated into groups with and without subject entries. The Subject Catalog was then stripped. Following this the Authority Cards were re-examined to determine if any cards had been overlooked and, if so, these cards were located and pulled. Assistance from document room personnel was requested from time-to-time to help

locate certain cards. Some cards were never located, perhaps through having been misfiled earlier; however, the incidence of this was quite low and amounted to no more than two or three per thousand.

2. Uncataloged Hard Copy Documents

Most of these documents were extra copies of AFCRL internal and contract documents; however, some were external agency documents. Processing of these latter documents will be described first.

The external agency reports were screened for subject content and the discards were processed as described earlier except, of course, no catalog cards were involved. Those documents which were to be kept were then separated by date into two groups consisting of those issued prior to the time DDC started making microfiche and those issued subsequent to that time. Actually the separation date was set about a year earlier to allow for the time to get to DDC. These documents were then checked against DDC indexes and separated into a group for which an AD number was found and another group where an AD number was not found. AFCRL personnel then placed orders for microfiche for those documents known to be available from DDC and, upon receipt of the microfiche, the hard copy documents were destroyed. The earlier documents were set aside for cataloging. Downgrading Cards were prepared for all these documents and attached to the documents pending receipt of microfiche or cataloging of the hard copy.

The AFCRL internal and contract documents were checked against the catalog to determine accession numbers, if any. Those with accession numbers were then checked against the shelves to determine whether two copies were on the shelves. Excess copies were processed for destruction after making sure two hard copies were held. Those documents without accession numbers were checked for the presence of technical material (as against strictly administrative data), downgraded where appropriate, Downgrading Cards were prepared where required and the documents were separated by corporate author. These documents were then sorted and checked to determine that no more than two copies were retained and the excess were processed for destruction.

3. Microfiche

The classified microfiche were processed to prepare Downgrading Cards and to remove any duplicates. Microfiche which were past due for downgrading (very few) were downgraded. The microfiche were then reshelfed.

4. Reference and Bibliographic Documents

These documents were checked for past-due downgrading and, where necessary, the downgrading was performed. Any required Downgrading Cards were prepared (marked to show that the document was in the Reference and Bibliographic File). A few duplicate copies and obsolete documents were discarded during this process, however, discards amounted to no more than 1%.

5. Final Processing of Downgrading File

After all cards had been prepared the file was sorted into final form. The cards had been filed by year initially on the supposition that no reference would be made to these cards except for downgrading and not until the year scheduled for downgrading. On this basis there was no need to sort by month (or any other variable) until the beginning of the year in which downgrading was to occur. Further thought showed that, since documents might be destroyed prior to that time, there was a need to be able to find cards for removal from the file without thumbing through a whole year's group (perhaps 1500 cards). For this reason the cards were sorted from yearly groups to monthly groups. If further experience shows that reference is required more often than now appears likely, it may be that these cards must also be sorted by shelf number.

D. Conclusion

The procedures presented above were developed as part of this contract to meet needs of AFCRL. It is believed that the procedures are such as to be usable by most libraries with no more than minor changes to meet special local problems.

The procedures provide for getting a document collection under control through a screening to get rid of documents no longer needed and then for keeping the collection under control through a continuing set of procedures designed to control accessions and retentions.

APPENDIXES

- 32 -

APPENDIX 1

FIELDS OF INTEREST FOR AFCRL

The following listing presents the fields of interest material used in screening the AFCRL classified collection. This is the suggested list for continuing screening of accessions for the near future. The list should be modified to reflect changes in orientation of work at periods in the order of one or two years.

DATA SCIENCES LABORATORY

Computer techniques, including:

1. Recognition Processes
 - a. Pattern Recognition
 - b. Pattern Extraction
 - c. Classification and Measurement
2. Communications
 - a. Speech Production
 - b. Voice Recognition
 - c. Speech Filtering, Processing and Patterns
 - d. Narrow Band TV
 - e. Analog Transmission and Error-Correcting Codes
3. Languages and Techniques
 - a. Computer Programming
 - b. Compilers
 - c. On-Line Programming and Means of Program Changing
4. Logic Networks and Circuits
 - a. Network and Circuit Theory
 - b. Contractor Services

SPACE PHYSICS LABORATORY

Research in solar, stellar, lunar and planetary astronomy, including fields and particles in near and deep space, including:

1. Astronomy Research
2. Solar Research
3. Radio Astronomy

4. Satellite Communications
5. Astrophysics
6. Magnetohydrodynamics
7. Near Earth Environment
8. Space Environment Forecasting
9. Energetics Research

UPPER ATMOSPHERE PHYSICS LABORATORY

Research on the physical and chemical properties of the earth's atmosphere from lowest level of the ionosphere to several earth radii where interplanetary space begins, including:

1. Physical Structure
2. Chemical Structure
3. Ultraviolet Radiation
4. Aurora and Airglow
5. Ionosphere Phenomena

AEROSPACE INSTRUMENTATION LABORATORY

Research on more precise and longer range weather forecasting and modification including:

1. Improved weather sensors and measurement devices
2. Weather radar techniques
3. Cloud physics
4. Dynamics of the atmosphere
5. Satellite meteorology
6. Stratospheric phenomena and processes

SOLID STATE SCIENCES LABORATORY

Exploitation of electromagnetic material phenomena and their application to military technology, including:

1. Material synthesis and analysis
2. Sensors, sources and devices
3. Solid state theory

MICROWAVE PHYSICS LABORATORY

Scattering and interaction of electromagnetic energy in natural and man-made environments, including:

1. Antenna theory and design
2. Limited warfare detection techniques
3. Plasma electrodynamics
4. Microwave acoustics
5. Radar absorbers

TERRESTRIAL SCIENCES LABORATORY

Sensors, instrumentation and measurement techniques in the field of seismology, geology, gravity, and geodesy including:

1. Atomic explosion testing and seismic effects

OPTICAL PHYSICS LABORATORY

Atmospheric effects on optical radiation including:

1. Transmission and background radiation
2. Infrared research
3. Laser physics

APPENDIX II

FORMS AND LETTERS

DOCUMENT ORDERING WORKSHEET

IDENTIFYING NUMBER	ORDERING REASON	ORDER DATE	COPIES	SOURCE	CLASS.	DATE	USER NAME	DATE OF RECEIPT

FIGURE 1

EXPLANATION OF TERMS:

1. Identifying Number - The ordering number (such as AD number) for the document. If not known, so indicate, and list identifying data on the back of the sheet or on a separate sheet.
2. Ordering Reason - Use the following codes: library stock - L; replacement of library stock - R; user request - U; local report - A; other, so indicate with a star and an explanation.
3. Order Date - Date on which order was placed.
4. Copies - Number of copies ordered and type: microfiche - mf; hard copy - hc, etc.
5. Source - Use the proper abbreviation - AEC, DDC, NASA, CFSTI.
6. Classification - Give the security classification, using standard abbreviations.
7. Date - The date of the receipt or acknowledgement of the order.
8. User - Leave blank if the library is the orderer, list name and organizational code if the user is a non-library person.
9. Receipt - Date of receipt (week/year) indicating the document is filed or has been distributed.

Letter 1

The documents unit of the AFCRL Library wishes to thank you for your recent distribution of _____ (document identification) to us. However, the decision has been made to operate to the maximum extent possible using microfiche from the secondary distribution agencies.

We would, therefore, appreciate your removing us from your distribution lists for all documents which will be forwarded to secondary distribution agencies (DDC, CFSTI, AEC or NASA). We would be happy to receive direct distribution from you of microfiche documents and documents in our areas of interest which will not be available from any of the secondary agencies.

FIGURE 2

Card For Downgrading File

Report No.	Date of Issue	
Title		
Source		
Original Classification:	S C	(circle one)
Downgrading Group:	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4	(circle one)
<input type="checkbox"/> Not Subject To Downgrading		
To Be Downgraded To CONFIDENTIAL On Date		
Downgraded By	Date	
To Be Downgraded To UNCLASSIFIED On Date		
Downgraded By	Date	

FIGURE 3

APPENDIX III

STATISTICS AND DISCUSSION ON THE
SCREENING OF THE AFCRL CLASSIFIED COLLECTION

A. Statistics

The major part of the effort on this contract was devoted to screening the classified document collection of the AFCRL Research Library according to the criteria and procedures initially developed.

At the time the work was initiated the library held a large number of classified documents. Following completion of the work this total number of documents had been reduced by about 52% and many of those retained had been declassified or downgraded. The following table presents information on documents in various categories, together with the percent retained and the percent recommended for destruction by the library personnel. (Contract terms forbade actual destruction of documents. Documents recommended for destruction were prepared for destruction and then turned over to library personnel for final decision and actual destruction in conjunction with the Security Office. As a result of this post-screening by library personnel some documents were saved which were recommended for destruction; however, the number of these documents was rather small -- perhaps 100 altogether.)

SUMMARY OF DOCUMENTS PROCESSED

<u>Type</u>	<u>% Kept</u>	<u>% for Destruction</u>
AFCRL Internal Hard Copy	100	0
AFCRL Contract Hard Copy	100	0
Accessioned and Cataloged External Hard Copy	12	88
DDC (and other) Microfiche	99	1
Miscellaneous Hard Copy	<u>45</u>	<u>55</u>
T O T A L	48	52

The percentages in the table are fairly accurate; however, a number of small groups of miscellaneous materials were processed toward the end which were not tallied as accurately as the bulk of materials were. The group called "Accessioned and Cataloged External Hard Copy" consists of all external materials which had been given accession numbers and cataloged locally. The "Miscellaneous Hard Copy" group consists of reference volumes, bibliographies, uncataloged materials, "turn-in" material and duplicate copies of materials in other categories.

B. Productivity Statistics

In any job of this sort the statistics for productivity in handling documents are of interest in estimating how much effort might be required to perform a similar task.

The initial estimate was that screening for subject matter and retention could be performed at about 150 documents per man day and that the processing of documents for destruction could also proceed at about 150 documents per secretary day. As it happened the estimate for total time was fairly close; however, the proportions were rather different.

Screening of documents for retention went rather faster than estimated even including the catalog references required for some material which was thought to be either duplicates or uncataloged. The daily rates were never below 150 per day while the average rate was about 250 per day. On some material which was far from being relevant to AFCRL's current interests the rate went as high as 800-900 per day.

Preparation of destruction certificates for Secret documents being destroyed proceeded at average rates of about 250 per day. This rate is quite sensitive to the presence of multiple copies and productivity varied from as low as 100 per day to as high as 300 per day.

The part of the work which took much more time than expected was removal of catalog cards for documents being discarded. This was for three different reasons and all three operated unfavorably.

The first reason was that the number of cataloged reports destroyed was higher than anticipated since it was known that many reports were uncataloged.

The second reason was that more cards per document were in the catalog than had been anticipated. The average had been expected to be about 4-5 cards per document while the actual was about 7-8 cards per document (some few documents went as high as 20).

The third reason was that the rate at which personnel can remove cards on a continuous basis is not too high. It was supposed initially that cards could be removed at a rate of about 1000 per day. Experience showed that rates of 600-700 per day are about all that can be expected on a day-long basis.

The overall effect of these three factors was to increase the time required for card picking from the estimated 1 3/4 day per 150 documents to about 1 1 1/2 days per 150 documents. Fortunately, the higher-than-estimated rate for screening allowed enough time to pick up the slack here.

Another important factor to be considered is the time required to change catalog cards when classified documents are downgraded. Experience showed this to be even slower than removing catalog cards. In this case, cards were removed and the notation of classification was marked out and re-stamped or, in some cases, over stamped on the card. It is obvious that it requires as long to locate a card here as for removal and that extra time is required to mark the card and replace it or refile elsewhere. While the job can be done by one person, experience showed that the job was more efficient using two people. One person located the card and placed it on a flat surface convenient at hand and replaced the card after the second person made the changes. This avoided having to mark the place in the drawer, pick up stamps and marking pen, change the card and then put down the materials and replace the card or refile elsewhere. The two people traded jobs periodically while doing this to equalize work and lessen fatigue. Even using this procedure the production rate is not too high, probably averaging about 500 cards per day for the two people.

BIBLIOGRAPHY

The first two groups of regulations contain most of the material relevant to handling, safeguarding and downgrading classified documents. Supplementary material may be found in the following four groups which are organized by DoD and the three services. For a very complete listing of regulations in effect as of the date of publication, see: "Classified Information and Technical Libraries", ATLIS Report No. 11, January 1967, prepared by Control Data Corporation (AD 812521L).

Handling of Classified Materials

AFR 205-1	Safeguarding Classified Information Department of the Air Force
AR 380-5	Safeguarding Defense Information Department of the Army
CPNAVINST 5510.1	Department of the Navy Security Manual for Classified Information Department of the Navy
NHB 1620.3	NASA Physical Security Handbook National Aeronautics and Space Administration
DoD 5220.22R	Industrial Security Regulation
DoD 5220.22M	Industrial Security Manual

Time-Phased Downgrading of Classified Material

DoD Directive 5200.10	Downgrading and Declassification of Classified Defense Information Department of Defense
AFR 205-2	Automatic, Time-Phased Downgrading and Declassifi- cation System Joint Publication of the Depart- ments of the Air Force, the Army and the Navy
AR 380-6	
OPNAVINST 5500.40B	
NMI 1640.2	Automatic Time-Phased Downgrading and Declassifica- tion System, National Aeronautics and Space Administration

DoD Directives and Instructions

5110.3 Supervision and coordination of the DoD information security program

5120.33 Classification management program

5200.1 Safeguarding official information in the interests of the defense of the U.S.

5200.6 Policy governing the custody, use and preservation of DoD official information which requires protection in the public interest

5200.8 Authority of military commanders under Internal Security Act of 1950 to issue security order and regulations for protection of properties or places under their command

5100.9 Declassification and downgrading of certain information originated before January 1, 1946

5200.18 Security classification guide for laser (optical maser) information

5200.20 Distribution statements (other than security) or technical documents

5210.2 Access to and dissemination of restricted data

U.S. ARMY REGULATIONS

70-11 Defense Documentation Center for scientific and technical information

70-22 Centers for analysis of scientific and technical information

310-1 Military publications; general policies

U.S. Navy Regulations and Instructions

OPNAVINST 5500.48	Classification management program
OPNAVINST P5510.45	United States Navy physical security manual
OPNAVINST 5510.49A	Guide for the handling and control of classified matter
SECNAVINST P5212.5B	Disposal of Navy and Marine Corps records

U.S. Air Force Regulations

181-3	Document storage and retrieval
190-6	Air Force information program
205-3	Security classification of infrared, visible and ultraviolet equipment, components and information
205-11	Security classification guide for laser (optical maser) information (U) (Regulation is Confidential)
205-23	Special security procedures for military space programs and projects (U) (Regulation is Confidential)
205-24	Classification management program
205-29	Classification criteria and factors for scientific and technical information
205-37	Security classification guides

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13. ABSTRACT <p>This report describes work done in development of criteria and procedures for management of collections of classified documents. Material is presented on philosophy of operation, concept of user service, accession and retention. Much of the discussion is based upon the concept of conversion to a microfiche-oriented library; however, hard copy documents are also considered. Some of the work is specific to the Air Force Cambridge Research Laboratories although an effort has been made to keep material as general as possible. Specific procedures are presented for handling a document collection containing both microfiche and hard copy documents.</p> <p>This project was sponsored by Air Force Cambridge Research Laboratories; Office of the Chief of Engineers, Department of the Army and the Army Research Office.</p>		

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